

## EAST Search History

## EAST Search History (Prior Art)

| Ref # | Hits | Search Query  | DBs  | Default Operator | Plurals | Time Stamp          |
|-------|------|---|--|------------------|---------|---------------------|
| S1    | 126  | ((DAVID) near2 (OGLE)).<br>INV.   | US-PGPUB;<br>USPAT; USOCR                          | OR               | ON      | 2011/08/22<br>16:01 |
| S2    | 32   | ((DAVID) near2 (OGLE)).<br>INV.   | EPO; JPO;<br>DERWENT                               | OR               | ON      | 2011/08/22<br>16:01 |
| S3    | 8    | (( "6413402" ) or<br>("6328869" ) or<br>("5393386" ) or<br>("5650055" )).PN.  | US-PGPUB;<br>USPAT;<br>USOCR; EPO;<br>JPO; DERWENT | OR               | OFF     | 2011/08/22<br>17:12 |
| S4    | 8    | S1 and (membrane or<br>barrier) near4 (support or<br>substrate)   | US-PGPUB;<br>USPAT                                 | OR               | ON      | 2011/08/22<br>17:21 |
| S5    | 77   | ("3878564"   "3989613"  <br>"4036748"   "4045337"  <br>"4045455"   "4069215"  <br>"4115225"   "4123342"  <br>"4174439"   "4196304"  <br>"4204929"   "4217227"  <br>"4238306"   "4238307"  <br>"4243507"   "4252652"  <br>"4259079"   "4269967"  <br>"4276140"   "4279724"  <br>"4299677"   "4322275"  <br>"4362612"   "4376023"  <br>"4381232"   "4383923"  <br>"4396477"   "4441978"  <br>"4533447"   "4608140"  <br>"4661224"   "4673483"  <br>"4711722"   "4746647"  <br>"4780411"   "4897169"  <br>"4963236"   "5039386"  <br>"5043048"   "5080770"  <br>"5082548"   "5087338"  <br>"5096547"   "5114555"  <br>"5127999"   "5160594"  <br>"5173164"   "5185086"  <br>"5238570"   "5277774"  <br>"5336387"   "5340449"  <br>"5352343"   "5407553"  <br>"5420047"   "5437774"  <br>"5441646"   "5490939"  <br>"5503744"   "5504239"  <br>"5558753"   "5561115"  <br>"5565102"   "5610285"  <br>"5662813"   "5723031"  <br>"5733442"   "5736023"  <br>"5868938"   "5891736"  <br>"5906724"   "5938904" | US-PGPUB;<br>USPAT; USOCR                          | OR               | ON      | 2011/08/22<br>17:27 |

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|     |      | "5986075"   "6093296"  <br>"6117297"   "6129842"  <br>"6171825").PN. OR<br>("6923896").URPN.  |  |    |     |                     |
| S6  | 16   | S5 and (membrane near3<br>(support or substrate))   | US-PGPUB;<br>USPAT; USOCR                          | OR | ON  | 2011/08/22<br>17:39 |
| S7  | 2812 | ((204/518-545,624-640.<br>ccls.)).CCLS.   | US-PGPUB;<br>USPAT;<br>USOCR; EPO;<br>JPO; DERWENT | OR | OFF | 2011/08/22<br>17:43 |
| S8  | 234  | S7 and (membrane or<br>filter) near3 (support or<br>substrate or housing)   | US-PGPUB;<br>USPAT                                 | OR | ON  | 2011/08/22<br>17:44 |
| S9  | 242  | S7 and (membrane or<br>filter) near3 (support or<br>substrate or hous\$4)   | US-PGPUB;<br>USPAT                                 | OR | ON  | 2011/08/22<br>17:44 |
| S10 | 2    | US-8918200-\$.DID. OR<br>US-2990361-\$.DID.   | US-PGPUB;<br>USPAT;<br>USOCR; EPO;<br>JPO; DERWENT | OR | ON  | 2011/08/22<br>18:06 |
| S11 | 5    | ((("4569747") or<br>("20060027457"))).PN.   | US-PGPUB;<br>USPAT;<br>USOCR; EPO;<br>JPO; DERWENT | OR | OFF | 2011/08/22<br>18:07 |
| S12 | 0    | ("2006/0027457").URPN.  | USPAT  | OR | ON  | 2011/08/22<br>18:10 |
| S13 | 41   | S7 and (membrane or<br>filter) near3 (support or<br>substrate or hous\$4 or<br>frame) near3 (rib or<br>spacer or edge)  | US-PGPUB;<br>USPAT                                 | OR | ON  | 2011/08/22<br>18:29 |
| S14 | 7    | ("4062756").URPN.   | USPAT  | OR | ON  | 2011/08/25<br>10:29 |
| S15 | 526  | ("20010035218"  <br>"20020172871"  <br>"20030019790"  <br>"20030019818"  <br>"20030041908"  <br>"20030116430"  <br>"20040005719"  <br>"20040027100"  <br>"20040108277"  <br>"20060016685"  <br>"20060137986"  <br>"20060138997"  <br>"20070023290"  <br>"20070108056"  <br>"20070120523"  <br>"20070175766"  <br>"2470741"   "2726356"  <br>"2825666"   "2829095"  <br>"2863813"   "2974681"  <br>"3003940"   "3233732" | US-PGPUB;<br>USPAT; USOCR                          | OR | ON  | 2011/08/25<br>10:31 |

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| "5906436"  | "5919357" |
| "5922209"  | "5925240" |
| "5931194"  | "5931196" |
| "5934971"  | "5948230" |
| "5957669"  | "5979551" |
| "6004438"  | "6009136" |
| "6019892"  | "6027645" |
| "6030529"  | "6032821" |
| "6047768"  | "6051131" |
| "6068450"  | "6074551" |
| "6076543"  | "6086757" |
| "6093329"  | "6103078" |
| "6105598"  | "6109778" |
| "6110342"  | "6110385" |
| "6117297"  | "6126516" |
| "6126796"  | "6126805" |
| "6132176"  | "6139714" |
| "6143184"  | "6146538" |
| "6149819") | PN. OR    |
| ("6153105" | "6176258" |
| "6180002"  | "6190564" |
| "6206091"  | "6206200" |
| "6217729"  | "6221248" |
| "6244574"  | "6263900" |
| "6267855"  | "6270671" |
| "6273937"  | "6280601" |
| "6284124"  | "6293975" |
| "6305555"  | "6308724" |
| "6309521"  | "6312577" |
| "6315886"  | "6315906" |
| "6328896"  | "6337014" |
| "6342163"  | "6343752" |
| "6344584"  | "6354819" |
| "6355157"  | "6358421" |
| "6373680"  | "6375851" |
| "6383389"  | "6391448" |
| "6398965"  | "6409926" |
| "6410672"  | "6419817" |
| "6419823"  | "6423234" |
| "6428677"  | "6434024" |
| "6440310"  | "6457698" |
| "6464211"  | "6468412" |
| "6472223"  | "6482305" |
| "6485641"  | "6491181" |
| "6497817"  | "6510959" |
| "6514398"  | "6524469" |
| "6536606"  | "6546685" |
| "6568282"  | "6572758" |
| "6575195"  | "6579450" |
| "6582605"  | "6592762" |
| "6607175"  | "6607647" |
| "6613230"  | "6620315" |
| "6623647"  | "6638413" |

|     |       |  |  |    |     |                     |
|-----|-------|--|--|----|-----|---------------------|
|     |       | "6645385"   "6645400"  <br>"6649037"   "6652758"  <br>"6659113"   "6660307"  <br>"6674249"   "6693139"  <br>"6709578"   "6716359"  <br>"6723246"   "6726893"  <br>"6733636"   "6736275"  <br>"6740235"   "6763846"  <br>"7087211"   "7163964"  <br>"7338590"   "7344629"  <br>"B408749"   "D248157"  <br>"D313330"   "D325740"  <br>"D387656"   "D389400"  <br>"D394697"   "D398368"  <br>"D456876"   "RE27701").<br>PN. |  |    |     |                     |
| S17 | 10    | ("3933617"   "4172779"  <br>"4303493"   "4350581"  <br>"4600493").PN. OR<br>("4737260").URPN.  | US-PGPUB;<br>USPAT; USOCR                          | OR | ON  | 2011/08/25<br>10:32 |
| S18 | 19    | ("3201339"   "3256174"  <br>"3284335"   "3761386"  <br>"3933617"   "4172779"  <br>"4204929"   "4233146").<br>PN. OR ("4303493").<br>URPN.  | US-PGPUB;<br>USPAT; USOCR                          | OR | ON  | 2011/08/25<br>10:43 |
| S19 | 3     | ("4990230").URPN.  | USPAT  | OR | ON  | 2011/08/25<br>11:37 |
| S20 | 2     | ("4990230").PN.  | US-PGPUB;<br>USPAT;<br>USOCR; EPO;<br>JPO; DERWENT | OR | OFF | 2011/08/29<br>14:48 |
| S21 | 11009 | ((210/154-172.5.ccls.)).<br>CCLS.  | US-PGPUB;<br>USPAT;<br>USOCR; EPO;<br>JPO; DERWENT | OR | OFF | 2011/08/30<br>11:13 |
| S22 | 3     | S21 and (barrier or<br>separator) near3 (drain<br>near3 (channel or port or<br>hole))  | US-PGPUB;<br>USPAT                                 | OR | ON  | 2011/08/30<br>11:15 |
| S23 | 30    | (US-20020023842-\$ or US-<br>20020043465-\$ or US-<br>20020176801-\$ or US-<br>20030019753-\$ or US-<br>20050167270-\$ or US-<br>20060037860-\$ or US-<br>20090134031-\$ or US-<br>20100326833-\$ or US-<br>20050242030-\$).did. or<br>(US-6919006-\$ or US-<br>6923896-\$ or US-6969453-<br>\$ or US-4362612-\$ or US-<br>4533447-\$ or US-5407553-<br>\$ or US-6436264-\$ or US-                                       | US-PGPUB;<br>USPAT; EPO                            | OR | ON  | 2011/08/30<br>11:16 |

|     |      |  |  |    |     |                     |
|-----|------|--|--|----|-----|---------------------|
|     |      | 7144735-\$ or US-7794577-\$ or US-4569747-\$ or US-4062756-\$ or US-4600493-\$ or US-4737260-\$ or US-4747929-\$ or US-4750983-\$ or US-5891328-\$ or US-6123823-\$ or US-4303493-\$ or US-3761386-\$).did.<br>or (WO-3070360-\$ or WO-2005015194-\$).did. |  |    |     |                     |
| S24 | 1    | S23 and (barrier or separator or spacer or frame) near3 (drain near3 (channel or port or hole))  | US-PGPUB;<br>USPAT                                 | OR | ON  | 2011/08/30<br>11:17 |
| S25 | 7    | S21 and (barrier or separator or spacer or frame) near3 (drain near3 (channel or port or hole))  | US-PGPUB;<br>USPAT                                 | OR | ON  | 2011/08/30<br>11:17 |
| S26 | 59   | "210".clas. and (barrier or separator or spacer or frame) near3 ((drain or overflow) near3 (channel or port or hole))  | US-PGPUB;<br>USPAT                                 | OR | ON  | 2011/08/30<br>11:19 |
| S27 | 52   | S26 not S25  | US-PGPUB;<br>USPAT                                 | OR | ON  | 2011/08/30<br>11:19 |
| S28 | 2    | ("4990230").PN.  | US-PGPUB;<br>USPAT;<br>USOCR; EPO;<br>JPO; DERWENT | OR | OFF | 2011/08/30<br>16:36 |
| S29 | 8    | ("4600493").URPN.  | USPAT  | OR | ON  | 2011/08/30<br>19:59 |
| S30 | 4    | ("2923676"   "3933617"   "4600493").PN. OR ("4786393").URPN.   | US-PGPUB;<br>USPAT; USOCR                          | OR | ON  | 2011/08/30<br>20:01 |
| S31 | 60   | "210".clas. and ((press\$5 or retain\$3) near4 (block or plate) near3 (grid or spacer))  | US-PGPUB;<br>USPAT                                 | OR | ON  | 2011/08/30<br>20:03 |
| S32 | 0    | ("2002/0148769").URPN.   | USPAT  | OR | ON  | 2011/08/30<br>20:12 |
| S33 | 3056 | "210".clas. and ((end or retain\$4 or press\$4) near4 (block or plate or frame)) with (rail or flow or channels or grid or perturber or protrusion or grooves or rib)  | US-PGPUB;<br>USPAT                                 | OR | ON  | 2011/08/30<br>20:15 |

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|-----|------|--|---|----|-----|------------------|
| S34 | 1518 | "210".clas. and ((end or retain\$4 or press\$4) near4 (block or plate or frame)) near4 (rail or flow or channels or grid or perturber or protrusion or grooves or rib)   | US-PGPUB; USPAT                           | OR | ON  | 2011/08/30 20:16 |
| S35 | 1618 | "210".clas. and ((end or retain\$4 or press\$4) near4 (block or plate or frame)) near4 (rail or flow or channels or grid or perturber or protrusion or groove or rib)  | US-PGPUB; USPAT                           | OR | ON  | 2011/08/30 20:16 |
| S36 | 1618 | "210".clas. and (((end or retain\$4 or press\$4) near4 (block or plate or frame)) near4 (rail or flow or channels or grid or perturber or protrusion or groove or rib))  | US-PGPUB; USPAT                           | OR | ON  | 2011/08/30 20:16 |
| S37 | 1060 | "210".clas. and (((end or retain\$4 or press\$4) near4 (block or plate or frame)) near4 (rail or flow or channels or grid or perturber or protrusion or groove or rib)) and @py<"2004"   | US-PGPUB; USPAT                           | OR | ON  | 2011/08/30 20:17 |
| S38 | 613  | "210".clas. and (((end or retain\$4 or press\$4) near4 (block or plate or frame)) near4 (rail or channels or grid or perturber or protrusion or groove or rib)) and @py<"2004"   | US-PGPUB; USPAT                           | OR | ON  | 2011/08/30 20:18 |
| S39 | 10   | ((("4786393") or ("3734298") or ("4039455"))).PN.  | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | OFF | 2011/09/02 10:16 |
| S40 | 40   | (US-20020023842-\$ or US-20020043465-\$ or US-20020176801-\$ or US-20030019753-\$ or US-20050167270-\$ or US-20060037860-\$ or US-20090134031-\$ or US-20100326833-\$ or US-20050242030-\$ or US-20080245750-\$ or US-20020148769-\$).did. or (US-6919006-\$ or US-6923896-\$ or US-6969453-\$ or US-4362612-\$ or US- | US-PGPUB; USPAT; EPO                      | OR | ON  | 2011/09/02 10:17 |

|     |    |   |                         |    |    |                     |
|-----|----|---|-------------------------|----|----|---------------------|
|     |    | 4533447-\$ or US-5407553-\$ or US-6436264-\$ or US-7144735-\$ or US-7794577-\$ or US-4569747-\$ or US-4062756-\$ or US-4600493-\$ or US-4737260-\$ or US-4747929-\$ or US-4750983-\$ or US-5891328-\$ or US-6123823-\$ or US-4303493-\$ or US-3761386-\$ or US-5009785-\$ or US-6238110-\$ or US-6365043-\$ or US-7314509-\$ or US-4786393-\$ or US-3734298-\$ or US-4039455-\$).did. or (US-6626094-\$).did. or (WO-3070360-\$ or WO-2005015194-\$).did.   |                         |    |    |                     |
| S41 | 9  | S40 and cartridge   | US-PGPUB;<br>USPAT      | OR | ON | 2011/09/02<br>10:17 |
| S42 | 40 | (US-20020023842-\$ or US-20020043465-\$ or US-20020176801-\$ or US-20030019753-\$ or US-20050167270-\$ or US-20060037860-\$ or US-20090134031-\$ or US-20100326833-\$ or US-20050242030-\$ or US-20080245750-\$ or US-20020148769-\$).did. or (US-6919006-\$ or US-6923896-\$ or US-6969453-\$ or US-4362612-\$ or US-4533447-\$ or US-5407553-\$ or US-6436264-\$ or US-7144735-\$ or US-7794577-\$ or US-4569747-\$ or US-4062756-\$ or US-4600493-\$ or US-4737260-\$ or US-4747929-\$ or US-4750983-\$ or US-5891328-\$ or US-6123823-\$ or US-4303493-\$ or US-3761386-\$ or US-5009785-\$ or US-6238110-\$ or US-6365043-\$ or US-7314509-\$ or US-4786393-\$ or US-3734298-\$ or US-4039455-\$).did. or (US-6626094-\$).did. or (WO-3070360-\$ or WO-2005015194-\$).did. | US-PGPUB;<br>USPAT; EPO | OR | ON | 2011/09/02<br>12:19 |
| S43 | 6  | S42 and retain  | US-PGPUB;<br>USPAT      | OR | ON | 2011/09/02<br>12:19 |

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|-----|-----|---|--------------------|----|----|---------------------|
| S44 | 0   | "210".clas. and (barrier or separator or spacer or frame) near3 (parralel near4 (ridges or channels or grid or ribs or protrusion))   | US-PGPUB;<br>USPAT | OR | ON | 2011/09/02<br>13:10 |
| S45 | 0   | "210".clas. and (barrier or separator or spacer or frame) with (parralel near4 (ridges or channels or grid or ribs or protrusion))  | US-PGPUB;<br>USPAT | OR | ON | 2011/09/02<br>13:11 |
| S46 | 112 | "210".clas. and (barrier or separator or spacer or frame) with ((longitudinal or parralel) near4 (ridges or channels or grid or ribs or protrusion))                                      | US-PGPUB;<br>USPAT | OR | ON | 2011/09/02<br>13:11 |
| S47 | 0   | "210".clas. and (barrier or separator or spacer or frame) with ((longitudinal or parralel) near4 (ridges or channels or grid or ribs or protrusion)) and PY@2003                          | US-PGPUB;<br>USPAT | OR | ON | 2011/09/02<br>13:11 |
| S48 | 72  | "210".clas. and (barrier or separator or spacer or frame) with ((longitudinal or parralel) near4 (ridges or channels or grid or ribs or protrusion)) and @py< "2003"                      | US-PGPUB;<br>USPAT | OR | ON | 2011/09/02<br>13:11 |
| S49 | 680 | "210".clas. and (((end or retain\$4 or press\$4) near4 (block or plate or frame)) near4 (rail or channels or grid or perturber or protrusion or groove or rib or spacer)) and @py< "2004" | US-PGPUB;<br>USPAT | OR | ON | 2011/09/02<br>14:02 |
| S50 | 613 | "210".clas. and (((end or retain\$4 or press\$4) near4 (block or plate or frame)) near4 (rail or channels or grid or perturber or protrusion or groove or rib)) and @py< "2004"           | US-PGPUB;<br>USPAT | OR | ON | 2011/09/02<br>14:02 |
| S51 | 67  | S49 not S50   | US-PGPUB;<br>USPAT | OR | ON | 2011/09/02<br>14:02 |

|     |     |  |                         |    |    |                     |
|-----|-----|--|-------------------------|----|----|---------------------|
| S52 | 48  | "210".clas. and (barrier or separator or spacer or frame) near3 (drain near3 (channel or port or recess or conduit))   | US-PGPUB;<br>USPAT      | OR | ON | 2011/09/02<br>17:04 |
| S53 | 216 | "210".clas. and (barrier or separator or spacer or frame) near3 (drain) and @py<"2003"   | US-PGPUB;<br>USPAT      | OR | ON | 2011/09/02<br>17:09 |
| S54 | 194 | "210".clas. and (separator or spacer or frame) near3 (drain) and @py<"2003"  | US-PGPUB;<br>USPAT      | OR | ON | 2011/09/02<br>17:09 |
| S55 | 0   | "210".clas. and membrane near3 (barrier or separator or spacer or frame) near3 (drain) and @py<"2003"  | US-PGPUB;<br>USPAT      | OR | ON | 2011/09/02<br>17:10 |
| S56 | 4   | "210".clas. and membrane near3 (barrier or separator or spacer or frame) near3 (drain)   | US-PGPUB;<br>USPAT      | OR | ON | 2011/09/02<br>17:10 |
| S57 | 0   | "204".clas. and membrane near3 (barrier or separator or spacer or frame) near3 (drain)   | US-PGPUB;<br>USPAT      | OR | ON | 2011/09/02<br>17:11 |
| S58 | 29  | "204".clas. and (barrier or separator or spacer or frame) near3 (drain) and @py<"2003"   | US-PGPUB;<br>USPAT      | OR | ON | 2011/09/02<br>17:16 |
| S59 | 40  | (US-20020023842-\$ or US-20020043465-\$ or US-20020176801-\$ or US-20030019753-\$ or US-20050167270-\$ or US-20060037860-\$ or US-20090134031-\$ or US-20100326833-\$ or US-20050242030-\$ or US-20080245750-\$ or US-20020148769-\$).did. or (US-6919006-\$ or US-6923896-\$ or US-6969453-\$ or US-4362612-\$ or US-4533447-\$ or US-5407553-\$ or US-6436264-\$ or US-7144735-\$ or US-7794577-\$ or US-4569747-\$ or US-4062756-\$ or US-4600493-\$ or US-4737260-\$ or US-4747929-\$ or US-4750983-\$ or US-5891328-\$ or US-6123823-\$ or US-4303493-\$ or US-3761386-\$ or US-5009785-\$ or US-6238110-\$ or US-6365043-\$ or US- | US-PGPUB;<br>USPAT; EPO | OR | ON | 2011/09/02<br>17:40 |



|     |        |   |   |    |     |                  |
|-----|--------|---|---|----|-----|------------------|
|     |        | 7314509-\$ or US-4786393-\$ or US-3734298-\$ or US-4039455-\$).did. or (US-6626094-\$).did. or (WO-3070360-\$ or WO-2005015194-\$).did. |   |    |     |                  |
| S60 | 1      | S59 and (barrier or separator or spacer or frame) near3 (drain) and @py< "2003"   | US-PGPUB; USPAT                           | OR | ON  | 2011/09/02 17:40 |
| S61 | 469860 | ]   | US-PGPUB; USPAT                           | OR | ON  | 2011/09/02 17:40 |
| S62 | 9      | S59 and drain   | US-PGPUB; USPAT                           | OR | ON  | 2011/09/02 17:40 |
| S63 | 16     | S59 and over near3 flow   | US-PGPUB; USPAT                           | OR | ON  | 2011/09/02 18:00 |
| S64 | 4      | S59 and over adj3 flow  | US-PGPUB; USPAT                           | OR | ON  | 2011/09/02 18:01 |
| S65 | 111    | "210".clas. and (over adj3 flow) near3 (channel or conduit)   | US-PGPUB; USPAT                           | OR | ON  | 2011/09/02 18:02 |
| S66 | 47     | "210".clas. and membrane and (over adj3 flow) near3 (channel or conduit)  | US-PGPUB; USPAT                           | OR | ON  | 2011/09/02 18:02 |
| S67 | 0      | "210".clas. and membrane and (over adj3 f4043896low) near3 (channel or conduit)   | US-PGPUB; USPAT                           | OR | ON  | 2011/09/02 18:15 |
| S68 | 30     | "4715955"   | US-PGPUB; USPAT                           | OR | ON  | 2011/09/02 18:15 |
| S69 | 6      | ((("4043896") or ("4715955")).PN.   | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT | OR | OFF | 2011/09/02 18:15 |
| S70 | 0      | S69 and (over adj4 flow)  | US-PGPUB; USPAT                           | OR | ON  | 2011/09/02 18:17 |
| S71 | 31     | "204".clas. and (barrier or separator or spacer or frame) near3 (drain or (over adj3 flow)) and @py< "2003"                             | US-PGPUB; USPAT                           | OR | ON  | 2011/09/02 18:34 |
| S72 | 227    | "210".clas. and (barrier or separator or spacer or frame) near3 (drain or (over adj3 flow)) and @py< "2003"                             | US-PGPUB; USPAT                           | OR | ON  | 2011/09/02 18:36 |

|     |    |  |                    |    |    |                     |
|-----|----|--|--------------------|----|----|---------------------|
| S73 | 38 | "210".clas. and (barrier or separator or spacer or frame) near3 (drain or (over adj3 flow)) near4 (channel or conduit or slot or outlet) and @py< "2003" | US-PGPUB;<br>USPAT | OR | ON | 2011/09/02<br>18:37 |
|-----|----|--|--------------------|----|----|---------------------|

**9/ 7/ 2011 10:42:06 AM****C:\ Documents and Settings\ gkaur\ My Documents\ EAST\ Workspaces\ 10567019.wsp**